Pond Restoration Project
Final Report

1999-Partners-02
Date of report: May 14, 2001

Abstract

The Pond Restoration Project includes the enhancement of an existing riparian habitat. The restoration includes repair and maintenance by excavation of an existing dam to improve holding capacity, and the establishment of rearing mounds. The establishment of habitat and vegetation beneficial to waterfowl, raptors, songbirds, cavity nesters, and small mammals within the pond riparian area will accelerate the development of the riparian complex.

Introduction

The goal of this project is to improve and establish riparian habitat and vegetation, improve holding capacity of the pond through repair of dam area and mitigate seepage. Enhance pond water quality through the establishment of aquatic vegetation and establish fish habitat to maintain year around fish populations.

Study Area

The project is located approximately three miles North of Weed, Ca. off Hwy 96. The pond is approximately three acres in size and is fed by natural rain/snow runoff and an irrigation ditch which transports water from another source into late spring. The dam forming the pond is old and contained an old spillway gate valve which was not functional but was leaking. Portions of the dam itself was demonstrating considerable seepage. The riparian area consists of native and non-native grasses, juniper, and various aquatic plants within the pond. The primary land use is livestock grazing.

Methods and Materials

Work on the pond was performed when the pond was void of water. The dam was excavated and improved. The old spillway gate valve in the bottom of the fill was removed and replaced with solid fill. The inside wall of the dam and the adjacent bottom pond area was excavated to better seal off water. These areas were rolled and treated with bentonite to provide maximum sealing. An overflow spillway was constructed at the east end of the dam.

The original plan called for the construction of three nesting mounds plus several duck boxes to be built and installed. As the project progressed the decision was made to add three additional nesting mounds, for a total of six, in place of duck

boxes. As part of the nesting mound excavation a large number of existing aquatic plants were removed and made a part of the nesting mound construction to assist in stability and initial establishment of vegetation.

Available woody debris of various sizes were place around the wetted edge areas of the pond to provide various habitats. Additionally, several juniper trees were removed from the upper slopes and placed in the pond for additonal cover and habitat.

Native grass seed was collected and was broadcast planted on the upland areas and on the rearing mound centers. These included:

Great Basin Wildrye
Beardless Wildrye
Bluebunch Wheatgrass
Idaho Fescue
Needle and Thread Grass
Mountain Brome
Thurber Needlegrass
Western Needlegrass
Beardless Wildrye

Along the waters edge there was broadcast planting of Reed Canary Grass, Bendt Grass, and Velvet Grass.

Pre and post photographs were taken and photo points were established.

Results and Discussion

The majority of the pond bottom, dam, and existing gate valve excavation was accomplished in late summer of 1999 along with the excavation of four nesting mounds. Available woody debris was also added during this time.

Grass seed planting took place early spring 2000.

During late summer 2000 two additional nesting mounds were established, adjustment work was accomplished on the spillway area and additonal woody debris was placed along the pond edge.

Results will be monitored on an annual basis with the use of photo monitoring.

The dam is exhibiting only minimal seepage and the pond maintained water throughout the year 2000.

Both spring of 2000 and 2001 there have been sightings of up to 12 pair of geese utilizing the pond and nesting mounds along with many ducks, and numerous turtles perched on the woody debris logs along the waters edge.

Summary and Conclusions

The dam and pond excavation appears to be effective with minimal seepage. The nesting mounds are becoming stable and are being appropriately utilized. The grass seed planting results have not yet been realized and will probably take several seasons to see some gainful results and may also require supplemental plantings.

There is increased use by waterfowl of the pond and nesting mounds.

An additional supplement to the project will be the coordination with California Department Fish and Game for the stocking of appropriate fish species in the pond.

Attachment 1a

GRANT AGREEMENT
SUMMARY OF EXPENDITURES
1999-PARTNERS-02
POND ENHANCEMENT PROJECT

Salaries and/or labor (including benefits)…….	$3,200
Expendable equipment, materials,supplies……...	9,180
Travel……	220
TOTAL PROJECT COST TO USWS	**$12,600**
In-kind contribution	$12,275
Total project cost with in-kind	$24,875